

### **ARC Discussion Draft RAOs Anaconda OUI**

“Given that groundwater restoration in a reasonable time frame is not likely to be practicable, and would not likely represent an achievable RAO, the following preliminary RAOs for OU-1 are intended to prevent further migration of the plume and to prevent exposure to the mine-impacted groundwater:

- Control leaching, infiltration, and migration of COPCs from on-Site sources to reduce/prevent continued sourcing to the alluvial aquifer.
- Manage groundwater withdrawals from agricultural wells at capacities that do not adversely affect plume control.
- Monitor groundwater at selected monitor wells, drinking water wells, and irrigation wells to verify and evaluate plume control and effectiveness of the remedy.

These RAOs are considered preliminary and subject to further refinement with EPA and stakeholder input as the human health risk assessment (HHRA) and FS progress. In particular, ARC anticipates that RAOs developed in conjunction with the HHRA are likely to include:

- Prevent ingestion of water having carcinogens posing excess risk levels.
- Prevent ingestion of groundwater having non-carcinogen COPCs posing excess risk levels.
- Prevent ingestion and/or direct contact with soils having non-carcinogen COPCs posing excess risk levels.
- Prevent direct contact/ingestion with soil having excess cancer risk from carcinogens.
- Prevent inhalation of carcinogens posing excess risk levels.”<sup>1</sup>

### **EPA Preliminary Comments**

- A table of COPCs should be included.
- The assumption that groundwater restoration in a reasonable time-frame is not practicable is premature.
- In the revision to this technical memorandum ARC will need to include groundwater restoration for beneficial use as a RAO.
- EPA cannot accept a RAO that restricts agricultural pumping.
- Monitoring is not a remedy nor an objective.
- Exposure pathways defined in the human health risk assessment (HHRA) will identify exposure pathways that must be interrupted.
- The conceptual site model (CSM) will be updated to include these exposure pathways throughout the site and aid in selecting remedies that interrupt the pathways.

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<sup>1</sup> “Draft Initial Screening of Remedial Alternatives.” Technical Memorandum. December 2, 2015. Atlantic Richfield Company / Brown and Caldwell.